

Title (en)

Impingement cooled turbine components with dirt separation

Title (de)

Turbinenkomponente mit Aufprallkühlung und Schmutztrennung

Title (fr)

Composants de turbine refroidis par courant d'air ayant un séparateur de saletés

Publication

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Application

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Priority

US 1862904 A 20041221

Abstract (en)

A vane (24) for use in a gas turbine engine has a leading edge (34) facing an upstream combustor. The vane (24) has hollow areas that receive an impingement tube for delivering impingement air. The impingement tube includes a radially outer portion (36) and a radially inner portion (40). An end wall (38) of the radially outer portion (36) is angled relative to a rotational axis of the turbine such that air entering the impingement tube from a radially outer source (28) has dirt directed away from the leading edge (34). Thus, dirt is less likely to clog leading edge air supply holes (44). In one embodiment, the inner and outer portions (36,40) are formed as separate pieces, and in another embodiment (Figure 4), the inner and outer portions (202,204) are formed as a single piece.

IPC 8 full level

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CPC (source: EP KR US)

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Citation (applicant)

US 4798515 A 19890117 - HSIA EDWARD S [US], et al

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